

INFORMATION REPORT

CD NO 25X1A

COUNTRY USSR (Kuybyshev Oblast)

DATE DIST 20 MAR 1957

SUBJECT Avto-Traktor-Detail Plant for Engine Parts in Kuybyshev

NO. OF ENCLS. 2

PLACE ACQUIRED

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1. The Avto-Traktor-Detail (ATD) Plant for Engine Parts was in the southwestern part of Kuybyshev (53°12'N/50°09'E), near the junction of the Samara River and the Volga River. Northwest of the plant was a large granary. The plant was on the site of a former monastery which had been rebuilt as a factory after the October Revolution. Repair work on the old buildings was started in 1945. The new forge was built in 1947 and the new hardening shop was completed by May 1949, but was not yet equipped with machinery. The transformer station is said to have been built in 1946. In 1947 and 1948 the machines were replaced with German machinery. *
2. The plant covered an area of about 400 x 250 meters. It comprised a new forge, an old forge, a nut department, two valve departments, a special latheshop and grinding shop for piston pins and connecting rods, a special latheshop for precision work, an electric repairshop, two hardening shops, a transformer station, a sawmill, an automobile repairshop, a kitchen, a messhall and a garage. Electric power was supplied from the outside, presumably from the Kuybyshev Power Plant. Oil and gas were supplied by underground pipelines. The plant had no spur tracks. About 100 meters from the plant fence was an industrial track running from the Kuybyshev railroad station to the elevator of the granary nearest the Volga River. The items produced at this plant were loaded at the granary. The plant had about 15 trucks for transportation purposes. **
3. According to one source, [REDACTED] 25X1 at the end of June 1945, the plant was then producing 80 mm mortar shells. According to another source, the plant was converted to peacetime production within three hours in mid-1945. Allegedly, only the dies for the hammers and presses had to be replaced. Since the conversion of the plant, the production program has included valves, connecting rods, bushings, bolts, sleeves, screws and nuts.

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4. This plant produced four sizes of valves. According to one source, [redacted] the daily production in May 1949 was approximately 13,500 large valves, with a stem length of 18 to 22 cm, and a disk diameter of 10 to 12 cm; 15,000 small valves with a stem length of 14 to 16 cm, and a disk diameter of 6 to 8 cm; 10,500 bell-shaped valves, stem length 18 to 20 cm, disk diameter 10 to 12 cm; and 12,000 tractor valves, stem length 25 to 28 cm, disk diameter 14 cm. According to another source, [redacted] 25X1
- [redacted] the daily valve production for Diesel and gasoline engines was 6,600 in June 1948, and according to still another source, [redacted] the daily production was 3,500 large and 4,800 small valves in May 1949. According to two sources, [redacted] 25X1
- [redacted] the daily production of connecting rods in 1948 and 1949 was 250 to 300 units although the daily quota was only 150 units. The bushings produced in this plant were 70 to 90 mm long and about 50 mm in diameter. The bushing production rate was not known. According to a source, [redacted] 25X1
- [redacted] the daily quota of Ajax bushings was about 3,000 units in June 1948 and the actual daily production was about 4,000 bushings. The sleeves produced in this plant were 15 to 20 cm long. Production figures on this item were not known. The daily production of shafts in May 1949 was about 15 shafts. These shafts were 1 to 3 meters long and 18 cm in diameter and they were allegedly destined for shipbuilding projects. Statistics on the production of semi-axles (Halbachsen) for vehicles were not known. The bolts produced in this plant were about 10 cm long and about 2.5 cm in diameter. Some of the bolts had round heads without threads and some had hexagonal heads. In May 1949 the quota per shift for each worker was allegedly 1,350 bolts with hexagonal heads and 3,000 bolts with round heads. Piston pins were allegedly produced only until 1945. The daily production of wheel disks (Tellerraeder) was about 750 pieces. Bearing bushings for shafts, some with diameters ranging from 5 to 15 cm, wall thicknesses from 1.5 to 3 cm and perforations from 4 to 6 cm, were produced. The daily production of this item was approximately 12,000 in 1948. The daily plant production also included 30,000 castellated nuts with an outside diameter of 19 mm and an inside diameter of 14.5 mm, 2,000 square nuts with an outside diameter of 22 mm and an inside diameter of 14.5 mm and 10,000 hexagonal nuts with an outside diameter of 36 mm. Flush type screws, 35 mm in diameter, with 14 threads and semi spherical heads were produced. The daily quota for these screws was 3,600 in June 1948 but the actual production for that period was only 3,300. The plant also produced valve rockers (Kipphebel fuer Ventile), coffee grinders and stabilizing fins for trench mortar ammunition. It was also reported that this plant allegedly produced large machine parts. 25X1
5. Saw material used by this plant included round iron and steel rods, octagonal iron, hexagonal iron which allegedly was shipped from the Krasny Oktyabrsk Iron and Steelworks in Stalingrad, as well as bronze and light metal bars. In May 1949 part of the valve production was shipped to the aircraft engine plant and aircraft frame construction plant in Bezmyanka.

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6. In 1943 and 1949 the plant employed approximately 3,000 workers, about 50 percent of whom were women. Work was done in three shifts. About 60 workers were employed in the new forge in each shift, and about 105 in Workshop No I. The plant was surrounded by a barbed wire fence and watch towers. Searchlights illuminated the plant by night. Plant police, half of them women, armed with submachine guns and carbines guarded the plant. ***

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* [] Comment. For location sketch of the plant, see Annex 1, based on information from all sources.

25X1A ** [] Comment. For layout sketch of the plant, see Annex 2, based on information from all the sources.

*** [] Comment. This report essentially agrees with the reference report with regard to the location and general layout and production of this plant, although the details on production statistics and the specific items produced vary somewhat.

2 Annexes: 2 sketches on ditto.

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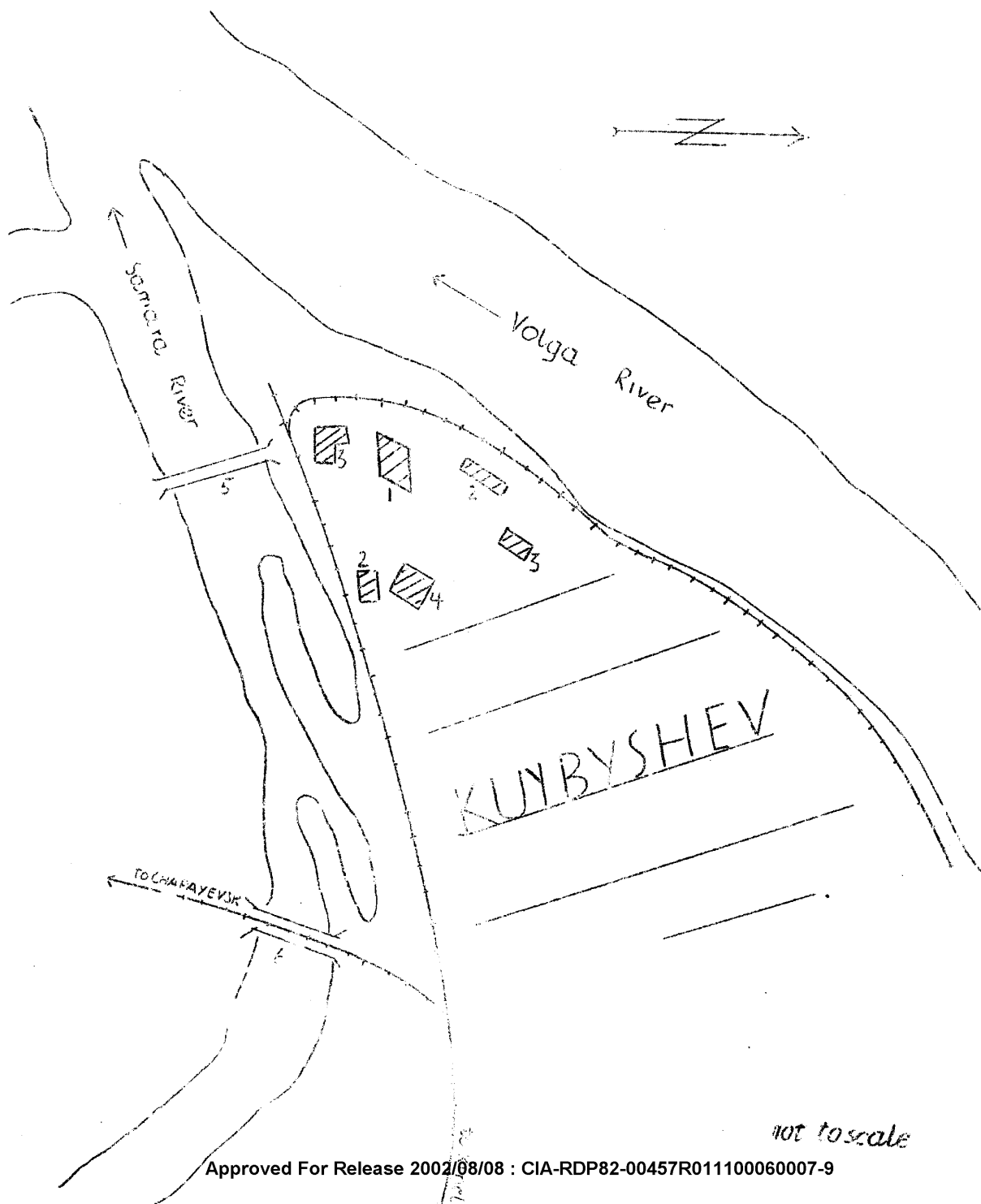
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Annex 1

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Location Sketch of the Auto-Traktor-Detail Plant for
Engine Parts in Kuybyshev

Legend: See next page.



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Annex 1

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Legend:

1. Avto-Traktor-Detail Plant for Engine Parts.
2. Granaries.
3. Mills.
4. Khlebnaya (grain) market.
5. Road bridge.
6. Railroad bridge.
7. Railroad station.

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Annex 2

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Legend:

1. New forge. The construction of the building started in 1944/1945 and was completed in 1947. In November 1948 all the machinery from the old forge was moved to the new forge. According to one source, [redacted] 25X1

25X1 [redacted] the production program of the forge comprised Ajax-bushings, connecting rods, bolts, valves, wheel disks (Teller-raeder), shafts, bushings, nuts and screws. The forge was equipped with three 1-ton pneumatic hammers which were about 6 meters, 4 meters and 2 meters high; 2 steam hammers, one 6 meters and the other one 12 meters high; 6 valve presses from the Kieserling Plant in Solingen (K 52/F 58); 3 Ajax presses for manufacturing Ajax bushings; 1 new press of Soviet make for manufacturing connecting rods; 1 American made press for cutting steel rods up to 15 cm in diameter; 1 eccentric screw press (Exzenterschraubenpresse) from the Goetz Plant; 1 press, 20 cm in diameter and 5 cm thick; 4 small 15 mm presses for manufacturing round steel for valves; 1 press used in making railroad ties, spikes and screws; 6 oil-fired annealing furnaces; 10 cutting shears (Schlagscheren); 1 upsetting and forging machine from the Kieserling Plant; and one 20 to 25-ton traveling crane. The forge also contained a hardening shop equipped with 7 small and 2 large hardening furnaces, and 2 acid baths for hardening semi-axles. The hardening shop processed 2,400 semi-axles daily. The axles remained in the bath for half an hour, then were placed in a cold water basin and finally into a sulphuric acid bath.

2. Old forge. In July 1948 the forge produced 1,200 screws per shift. Valves were also punched in this forge. In June and July 1947 the equipment of the old forge comprised 1 screw press, 5 valve presses, 1 small press for manufacturing padlocks, 3 grinding stones, 8 oil- and gas-fired furnaces for preliminary annealing; 5 small cutting presses for steel rods up to 2 cm in diameter; 2 electric hammers, 2 steam hammers and one 10-ton traveling crane. Since the end of 1946 the machines of the old forge have been removed and part of them were reinstalled in the new forge. The old forge was vacant in November 1948 and was used only to store lumber and to house an office. There was an annex to the old forge which was a machine shop manufacturing valve blanks. According to one source, who worked in this department as a lathe and press operator, the shift quota was 1,300 valve blanks. The production allegedly started in May 1948. The machine shop was equipped with about 30 machine tools including 2 new grinding benches, 7 lathes, 2 slot milling machines, 2 grinding stones, 1 small press, 1 drilling machine and 1 electric hardening installation for hardening valve heads. The building also housed a material test room for testing the hardness of the completed valves, and a tool shed where all tools and plates were stored.

3. Nut department, Workshop IV. Hexagonal and castellated nuts, screws and bolts were processed in this department. [redacted] 25X1
- 25X1 [redacted] this department, manufactured heads of various types of bolts, screwed nuts on bolts by machine, removed part of the head of flush bolts, and reground hexagonal bolt heads.

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Annex 2

The equipment of the nut department comprised about 16 new German automatic machines; 4 to 5 grinding machines of Swedish make; about 7 drilling machines, including some of German make; 5 to 8 thread cutting machines of Soviet make; 8 milling machines, including three of German make; 2 punching machines, one of German the other one of Russian make; and lathes, including many of German make. There was an office on the first floor of this shop. 25X1

4. Valve department, Workshop I. [redacted]

machine tools. The valve blanks, which came from the forge in four different sizes, were turned, milled and ground in this department. The equipment comprised 6 disk lathes, 1 shaft-straightening machine, 5 to 8 shaft lathes, 2 to 4 lathes for finishing work, 2 punching machines, 3 to 4 slotting machines, 4 to 5 milling machines including machines of Soviet, German and French make, 2 slot milling machines, about 12 grinding machines including 6 wet-grinding machines for shafts and 6 dry-grinding machines for disks. The German machines were installed in 1947 and 1948. The valve department also had a material test room for testing the hardness of the material and of the valves.

5. Department for tractor valves, Workshop III. [redacted]

Valves for airplanes and automobiles were produced in this department. The equipment comprised 6 lathes, including 3 for disks and 3 for shafts; 2 lathes used to process the outer rim of the valve disk; 2 lathes used to process the inclined valve seat; 4 drilling machines; 1 punching machine used to cut the shaft to the exact length; 2 slotting machines; 2 milling machines used for milling a slot in the valve disk; 1 milling machine used for milling the shaft ring; 4 grinding machines used to grind the valve seat; 3 rough, medium and fine grinding machines used to grind shafts; 1 grinding machine used to grind steel for lathes; 2 grinding machines used for longitudinal grinding and 1 hardening bath. The completed valves were inspected on a test table and then marked with a control stamp. 25X1

6. Special latheshop and grinding shop, Workshop II. [redacted]

Piston pins for ship engines were manufactured in this department until 1945. After January 1946, this shop drilled, milled and bored connecting rods and screwed the jaws (Backen) to the connecting rods. Since 1947 this shop has also been used for turning and grinding bolts. These bolts were about 10 cm long and about 2.5 cm in diameter with round heads and no threads. The equipment of this shop included lathes of various sizes, shaping machines, drilling machines, milling machines, polishing machines, grinding machines and small presses. The machines were new and each machine had an electric motor. There was a repairshop in which crankshafts were also manufactured.

7. Special latheshop for precision work. [redacted]

This shop repaired and manufactured tools for the plant, and repaired machine tools and dies. This shop also produced small parts for the repair shop, simple padlocks which were 12 x 10 cm. coffee grinders, and stabilizers for trench mortar.

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Annex 2

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ammunition. The equipment comprised about twenty lathes, four to five planers, two drilling machines, one horizontal milling machine, and two grinding machines. The machines were new and were of German, American, Swedish, and Swiss make.

8. Hardening shop. The parts manufactured in Workshops I, II, III, and IV were hardened in this shop. The equipment included four to five electric hardening furnaces having a maximum temperature of 1,200 centigrade, four rotary drums for cleaning the screws, one storage battery charging installation and oil and acid baths. Two new electric hardening furnaces were under construction during the fall of 1948. There was also a material testing room.
9. New hardening shop, the construction of which was started in 1945 and 1946. [redacted] 25X1
[redacted] one [redacted] the [redacted] work was still under way in April 1949. About fifteen machines had not yet been installed as of May 1949. The department was equipped with six to ten electric hardening furnaces, some of which were square and some were round.
10. Transformer station, put into operation in the fall of 1948.
11. Electric repairshop, attached to the kitchen building.
12. Sawmill.
13. Boilerhouse which supplied the plant with steam heat. It had two large coal-fired fire tube boilers of Soviet make. [redacted] 25X1
[redacted] one of these boilers was set up in the fall of 1947. The installation of a third boiler allegedly began in the fall of 1948. Next to the boilerhouse was a brick smoke stack, 40 to 45 meters high.
14. Former church building, which housed an automobile repairshop, a welding shop, a carpentry shop, and a store room. Its equipment included one electric welding unit, one autogenous welding unit, six mobile electric welding units, and one foundry with a small smelting furnace in which bronze parts for plant requirements were produced. There was also one installation for charging storage batteries of the plant trucks.
15. Garage and repairshop.
16. Kitchen and messhall.

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